

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

LAKE SUPERIOR CHARTER FISHING REPORT 2021

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METHODS

In the 2021 fishing season, 35 active licensed charter captains operated in the Wisconsin waters of Lake Superior, the most active licenses during the period of 2000–2021. Harvest estimates for guided charters came from mandatory monthly reports initiated in 1973. Information on the number of anglers, hours fished, location (grid) and number of various species harvested was included in the Sport Trolling License Monthly Report (Form 9400-249). Charter reports from October and November were not used in this report due to the closure of the Lake Trout sport fishing season during this period. The Wisconsin waters of Lake Superior are divided into two management units: WI-1 or the Western Arm (west of the line running north-south from Bark Point; 46 deg. 53.21 min. N, 91 deg. 11.16 min. W) and WI-2 or the Apostle Islands region (east of the Bark Point line; Figure 1). Charter results were therefore separated by management unit.

Please note that the charter fishing data alone may not perfectly illustrate the status of the entire recreational fishery each year. Please refer to the Lake Superior Creel Report 2021 for more detailed numbers for harvest estimates of all species in the recreational fishery. All analyses were conducted in Program R, and the report was formatted using RMarkdown.

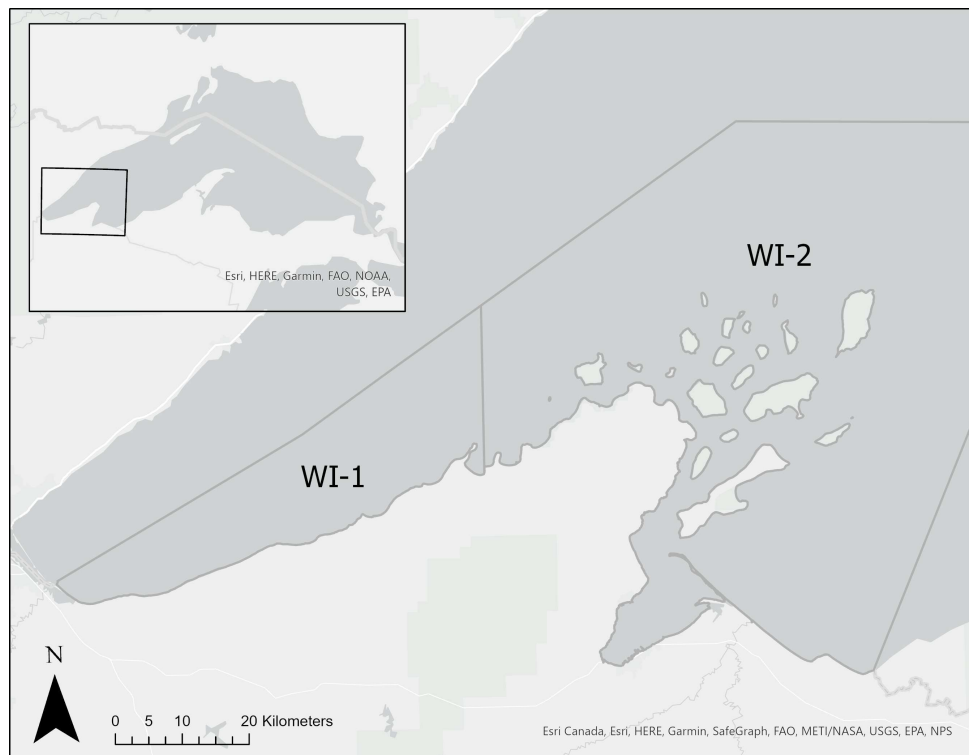


Figure 1. Wisconsin waters of Lake Superior and management units WI-1 and WI-2.

Results

WI-1

There was a total charter effort of 3,025 angler-hours in management unit WI-1 in 2021, which is near the long-term average (Figure 2). This effort yielded a total of 743 harvested fish, including 508 Lake Trout, 96 Coho Salmon and 36 Walleye (Figure 3). The Lake Trout harvest was slightly lower than in 2019 and 2020 (Figures 3 and 4). In addition, the 2021 Coho Salmon harvest was above average, and the 2021 Walleye harvest was below average (Figure 3). The annual Lake Trout harvest rate in the 2021 charter fishing season was 0.1679 fish per angler-hour, which was below average for the time series (Figure 5). The Lake Trout charter harvest was near average in May and June but dropped off to below average in July and August (Figure 6). Lastly, the Lake Trout harvest rate was below average in all months in WI-1 in 2021 (Figure 7).

WI-2

In 2021, the trigger to the sport-fishing allotment of the overall WI-2 Lake Trout quota was reached before the end of the Lake Trout season (Sept. 30), prompting an early closure to the WI-2 Lake Trout fishery on Aug. 15, 2021.

There was a total charter effort of 9,383 angler-hours in management unit WI-2 in 2021, the highest effort on record going back to 2000 (Figure 2). This effort yielded a total of 2,810 harvested fish including 2,034 Lake Trout, 460 Coho Salmon and 242 Brown Trout (Figure 3). The Lake Trout harvest was above average (Figures 3 and 4). In addition, both the 2021 Coho Salmon and Brown Trout harvests were above average (Figure 3). The annual Lake Trout harvest rate in the 2021 charter fishing season was 0.2168 fish per angler-hour, which was below average (Figure 5). The Lake Trout charter harvest was well above average in May, June and July but well below average in August in WI-2 in 2021 (Figure 6). Lastly, the Lake Trout harvest rate in the 2021 charter fishery was well above average in May but near or below average in June, July and August (Figure 7).

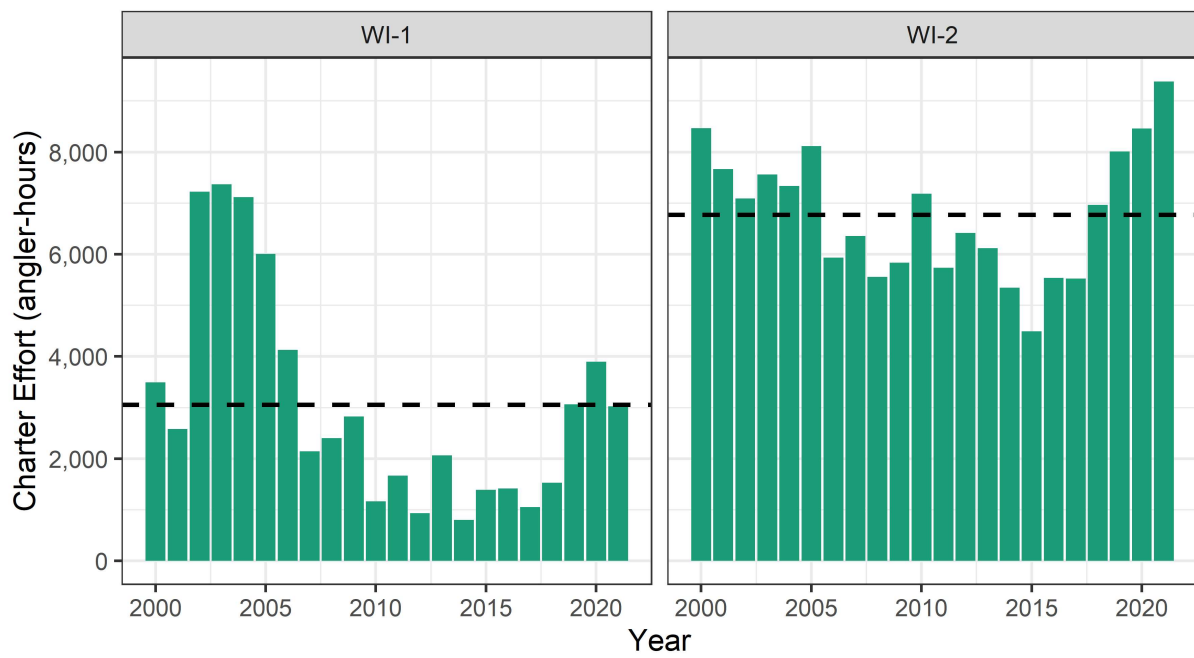


Figure 2. Charter angler effort (angler-hours) annually from 2000 to 2021 in management unit WI-1 (left) and WI-2 (right). Dashed lines represent mean annual effort for each management unit throughout the time series.

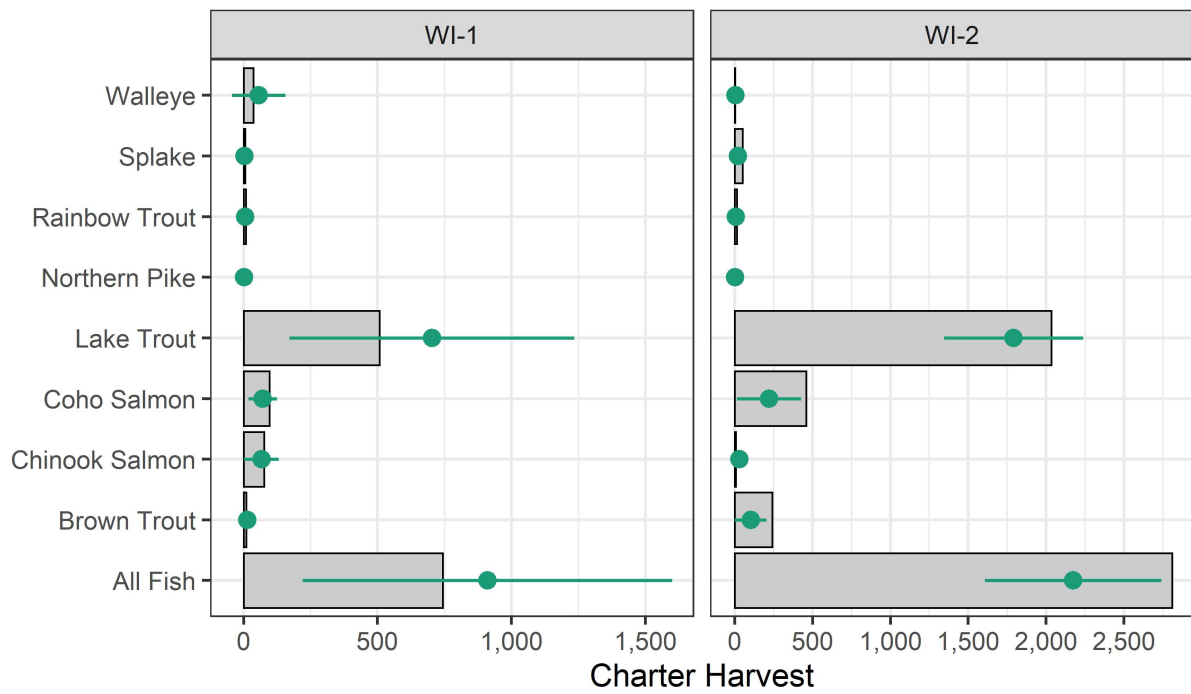


Figure 3. Charter harvest by species during the 2021 charter fishing season by management unit (WI-1 and WI-2). Green points and lines represent the annual mean since 2000 (+/- one standard deviation).

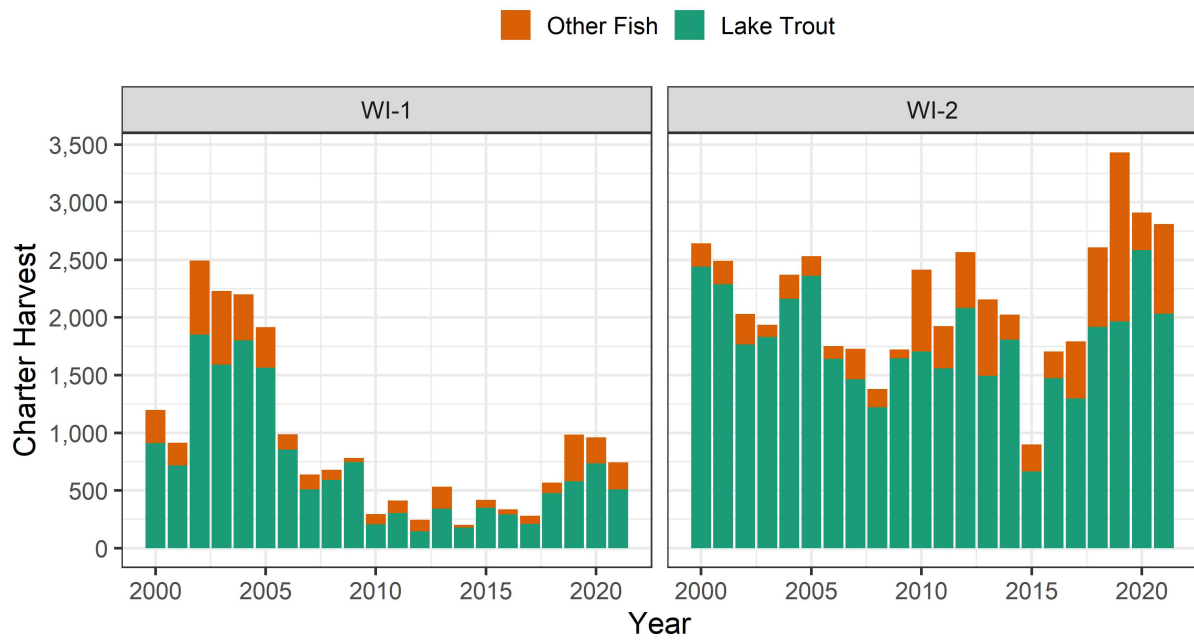


Figure 4. Annual harvest of Lake Trout (green) and all other fish (orange) in WI-1 (left) and WI-2 (right) during the charter fishing season from 2000 to 2021.

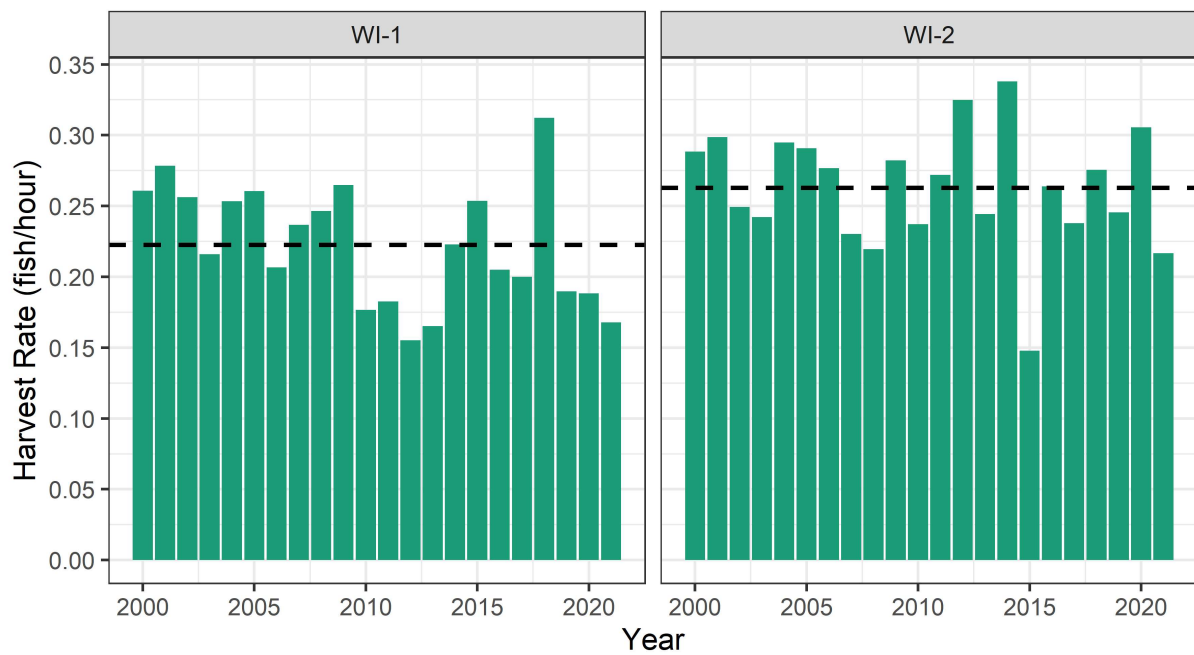


Figure 5. Annual harvest rate (fish/angler-hour) of Lake Trout in WI-1 (left) and WI-2 (right) during the charter fishing season from 2000 to 2021. Dashed lines represent mean annual harvest rate for each management unit throughout the time series.

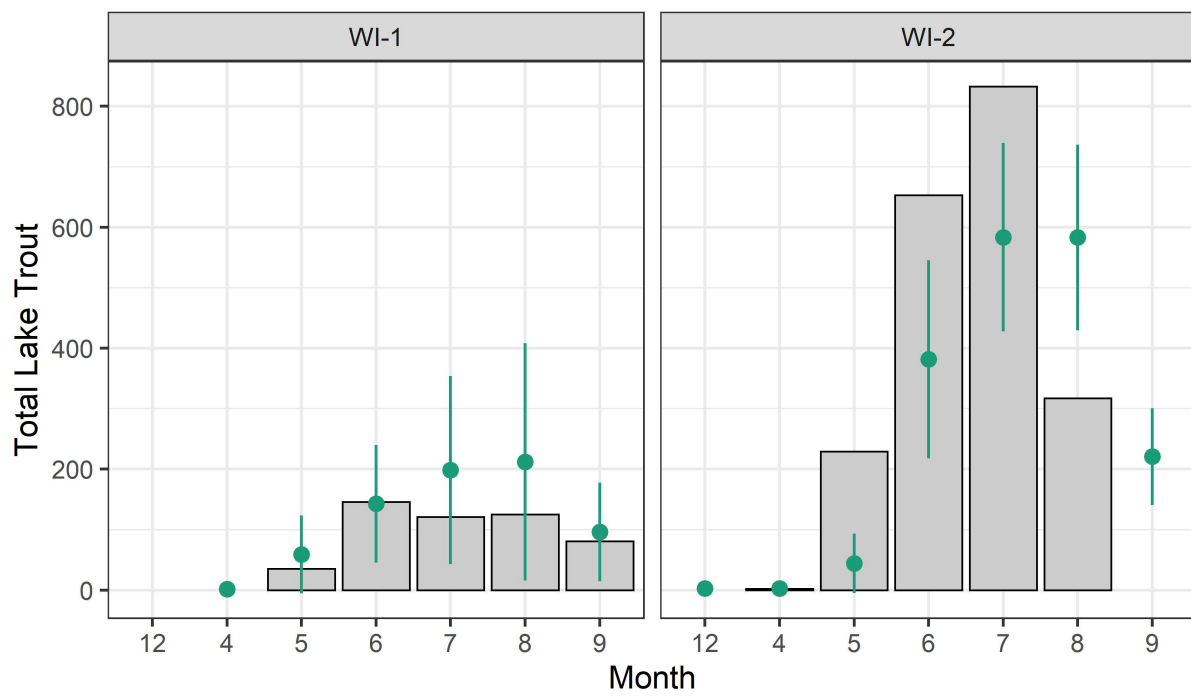


Figure 6. Lake Trout harvest by month during the 2021 charter fishing season in management unit WI-1 (left) and WI-2 (right). Green points and lines represent the mean (+/- one standard deviation) lake trout harvest by month since 2000.

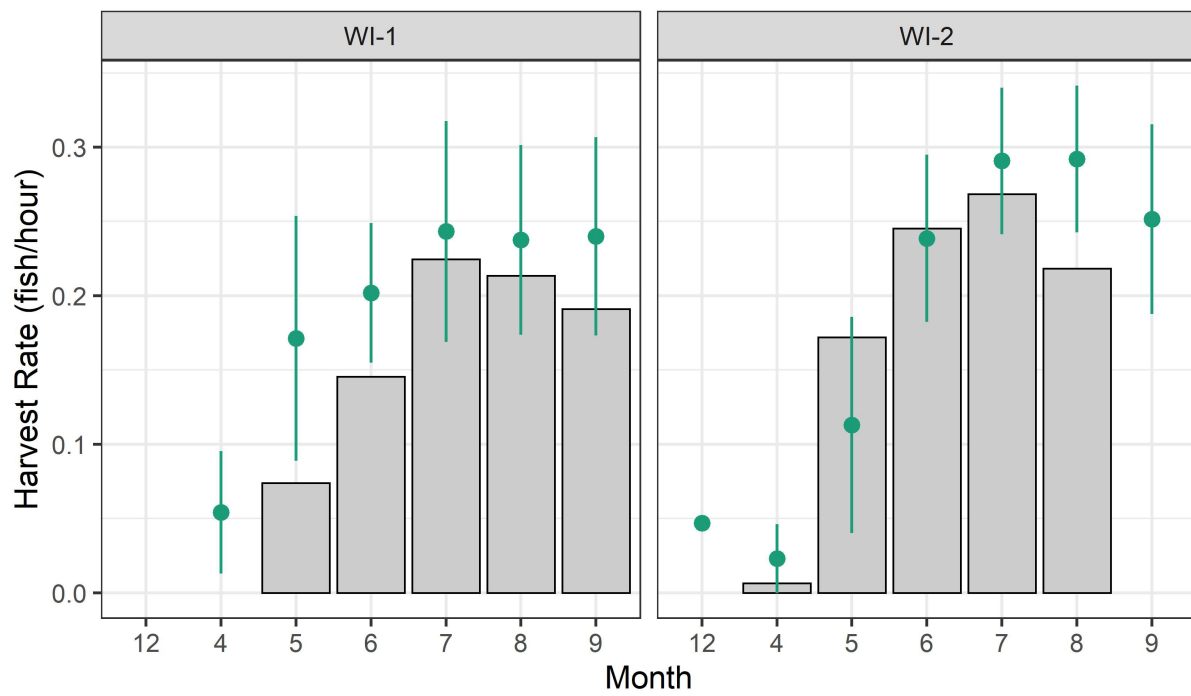


Figure 7. Lake Trout harvest rate (fish per angler-hour) by month during the 2021 charter fishing season in management unit WI-1 (left) and WI-2 (right). Green points and lines represent the mean (+/- one standard deviation) lake trout harvest rate by month since 2000.